

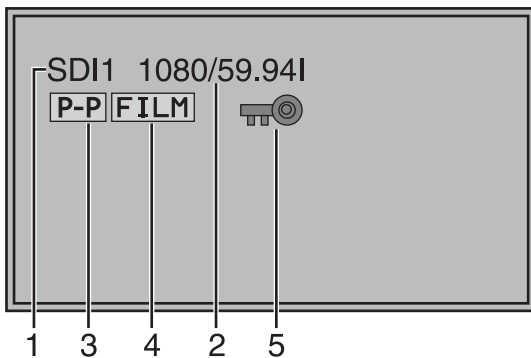
# **Panasonic Broadcast**

## **BT-LH1760P Menu Information**

# How to Use the On Screen Menu

The screen displays eight types of information: input signal status, picture adjusting knob status, sharpness display, FUNCTION display, audio level meter display, menu display, time code display and closed caption display.

## Input signal status



### 1. The selected input line (→ page 9, 2)

- VIDEO, SDI1, SDI2, YPbPr/RGB-VIDEO/RGB-COMP. DVI-VIDEO/DVI-COMP.

### 2. Signal format

- Use “STATUS DISPLAY” in the “SYSTEM CONFIG” menu to set the display status (→ page 22).
- “UNSUPPORT SIGNAL” appears if an unsupported signal is input. It may also indicate that the format selected in the “INPUT SELECT” menu does not match the input signal.
- “NO SIGNAL” appears if no signal is input.

### 3. Various indications (PIXEL TO PIXEL mode)

- This indicates the PIXEL TO PIXEL mode is engaged.

### 4. Various indications (FILM mode)

- This indicates that “GAMMA SELECT” is set to “FILM.”

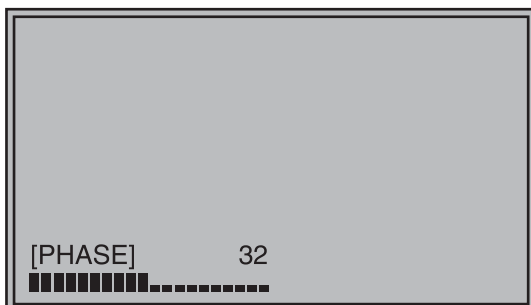
### 5. Various indications (lock status)

- This indicates that the control lock is on.

#### Note:

“UNSUPPORT SIGNAL” and “NO SIGNAL” may not be properly displayed.

## Picture adjusting knob status



### Picture adjusting knob (→ page 9, 4)

- Press or turn this knob to make adjustments.
- The status display appears when the knob is pressed. To clear the display, press the knob again or leave it idle for 10 seconds.
- Only adjustments that appear on the screen can be adjusted.
- The display always appears in the same screen location.

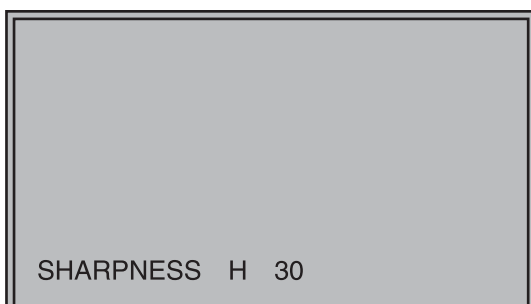
Display status:

PHASE, CHROMA, BRIGHT, CONTRAST or BACKLIGHT.

#### Note:

The status of the volume knob does not appear on the screen.

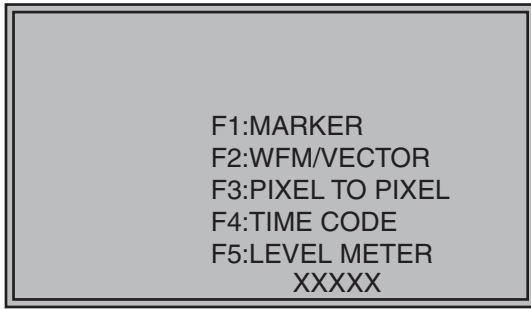
## Sharpness display



- This is the SHARPNESS H/V mode display.
- It disappears after 2 minutes of inaction.

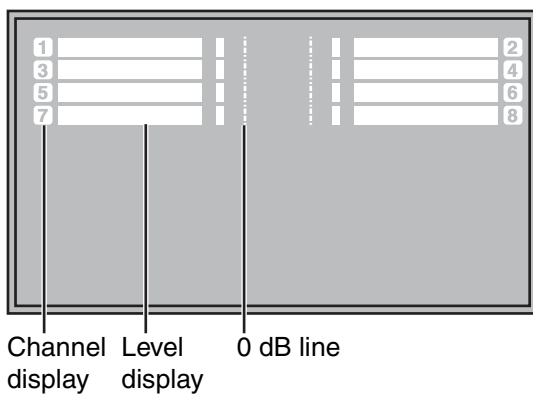
# How to Use the On Screen Menu (continued)

## FUNCTION display



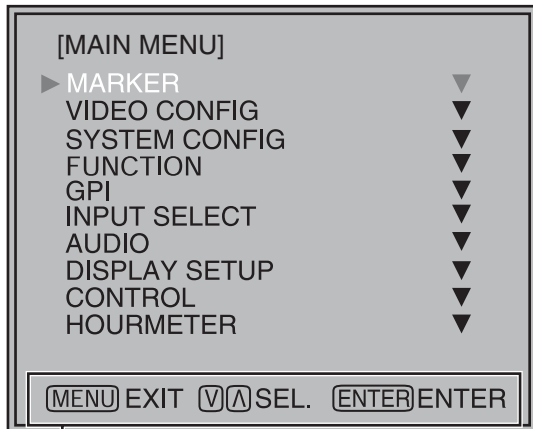
- Use the menu to open and set up functions.
- When “FUNCTION DISPLAY” (→ page 23) is set to ON, press any of the “FUNCTION1” to “FUNCTION5” buttons to display the functions assigned to the FUNCTION buttons.
- This display disappears after 2 seconds of inaction.
- “XXXXX” indicates operating status (→ page 25, “Functions displayed during FUNCTION button operation”).

## Audio level meter display



- A white skeleton bar meter indicates the audio level for SDI signals.
- You can switch the level display on/off and set the number of displayed channels using the menu.
- The 0 dB line and channel display can be switched on/off from the menu.

## Menu display

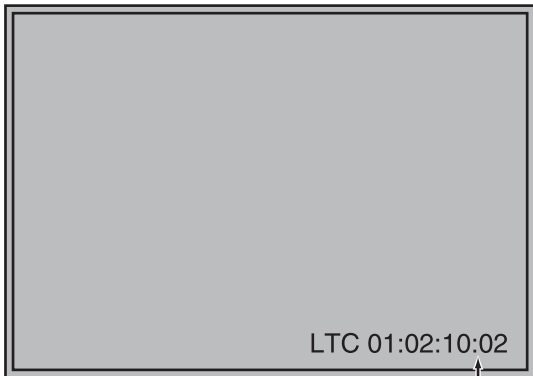


Displays instructions on menu button operations.

- This is the menu display.
- It disappears after 2 minutes of inaction.
- You can change position of the display (→ page 22, “MENU POSITION”).

# How to Use the On Screen Menu (continued)

## Time code (TC) display



( :) NDF  
( . ) DF

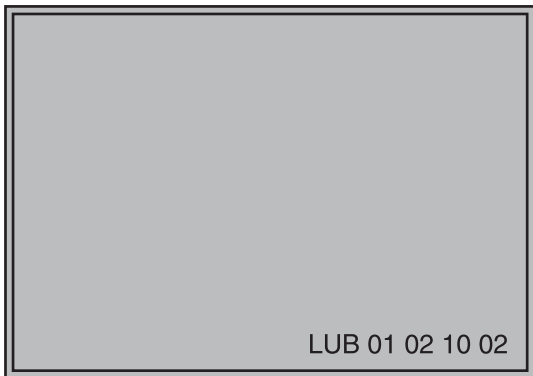
- Use the menu to display the time code for HD-SDI signal input. It also allows you to switch display mode (VITC, LTC, VUB, LUB).

In VITC and LTC display mode:

- Displays the time code in hours: minutes: seconds: or frames.
- In drop-frame mode, a different delimiter between seconds and frames is used.

**Note:**

Read errors are displayed as "--:--:--:--"



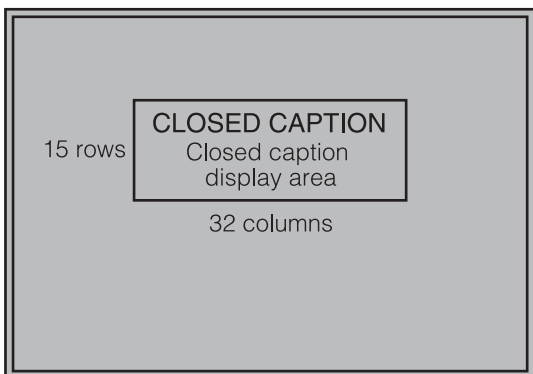
In VUB and LUB display modes:

- BG8, BG7, BG6, BG5, BG4, BG3, BG2, BG1 appear in the stated order. BG: binary group
- The (:) delimiter does not appear.

**Note:**

Read errors are displayed as "--:--:--:--"

## Closed caption (CC) display



- Use the menu to display closed caption for VIDEO (NTSC) signals. It also allows you to select display mode (CC1 to CC4).

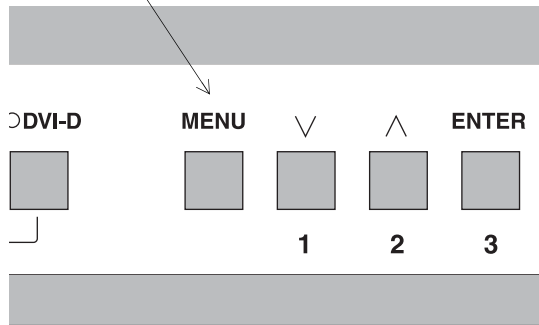
**Note:**

Closed captions are not available during HV DELAY.

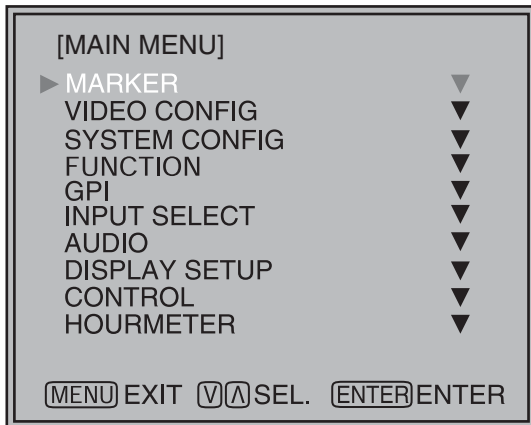
# How to Use the On Screen Menu (continued)

## Menu operations

1. Press [MENU] to display the MAIN menu.

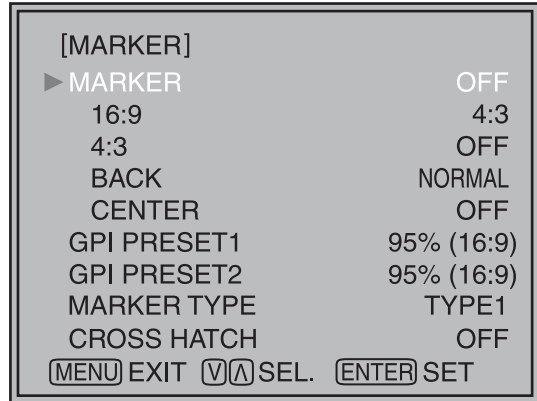


2. Press [V, ^] to select a menu and press [ENTER].



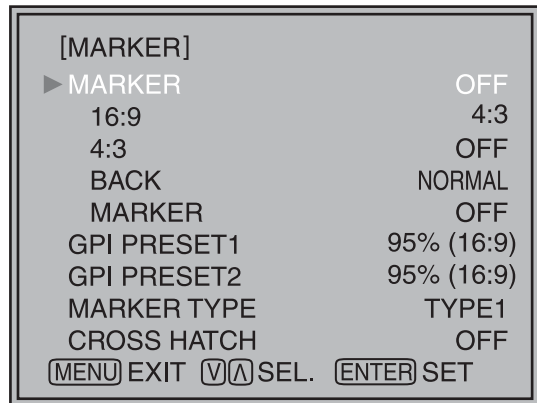
3. Press [V, ^] to select a sub menu and Press [ENTER].

The settings in the sub menu change to green.



4. Press [V, ^] to select a setting, then press [ENTER].

To cancel, press [MENU].



**To return to the previous screen**

Push [MENU].

# User Data

You can save and load up to five combinations of menu settings and adjustments made with the picture adjustment knob as user data. You can also return settings and adjustments to their factory defaults.

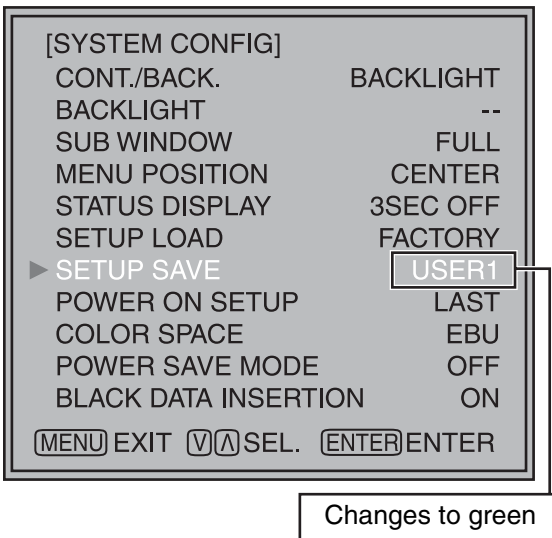
User data include the following settings.

- Menu settings except “SETUP LOAD/SAVE” (including button function settings on the monitor front panel)
- Screen adjustments made with the picture adjusting knob

## Saving user data

1. Press [MENU] to display the MAIN menu.
2. Press [V, ^] to select the “SYSTEM CONFIG” menu and press [ENTER].
3. Press [V, ^] to select the “SETUP SAVE” sub menu and press [ENTER].

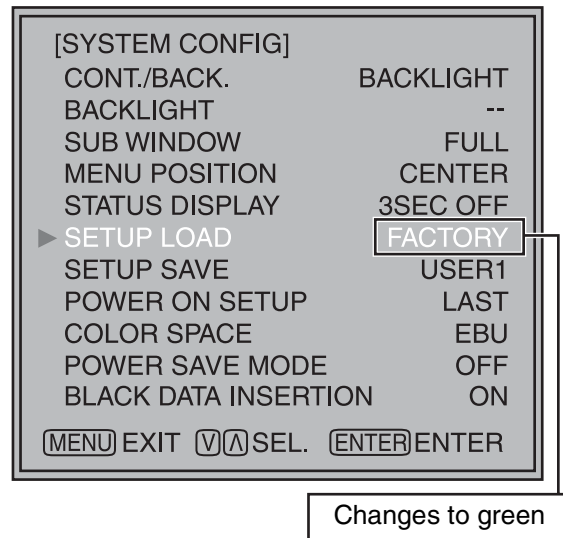
The setting in the sub menu changes to green.



## Loading user data

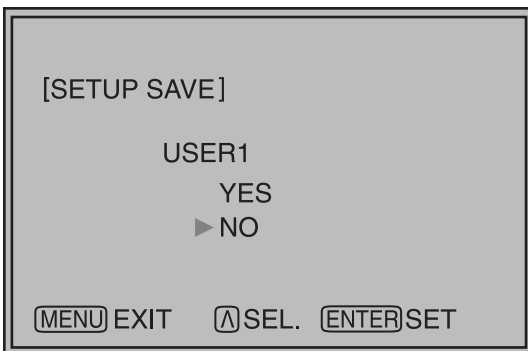
1. Press [MENU] to display the MAIN menu.
2. Press [V, ^] to select the “SYSTEM CONFIG” menu and press [ENTER].
3. Press [V, ^] to select the “SETUP LOAD” sub menu and press [ENTER].

The setting in the sub menu changes to green.



4. Press [V, ^] to select a “USER1” to “USER5” file to save the settings to and press [ENTER].

The following screen appears.



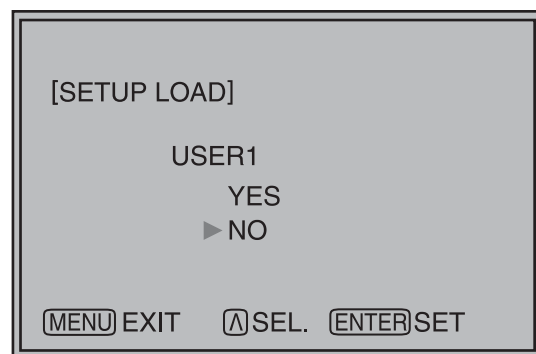
5. Select “YES” and press [ENTER].

This saves the user data.

4. Press [V, ^] to select a “USER1” to “USER5” file to load and press [ENTER].

The following screen appears.

To return to the factory defaults, select “FACTORY.”



5. Select “YES” and press [ENTER].

This loads the user data.

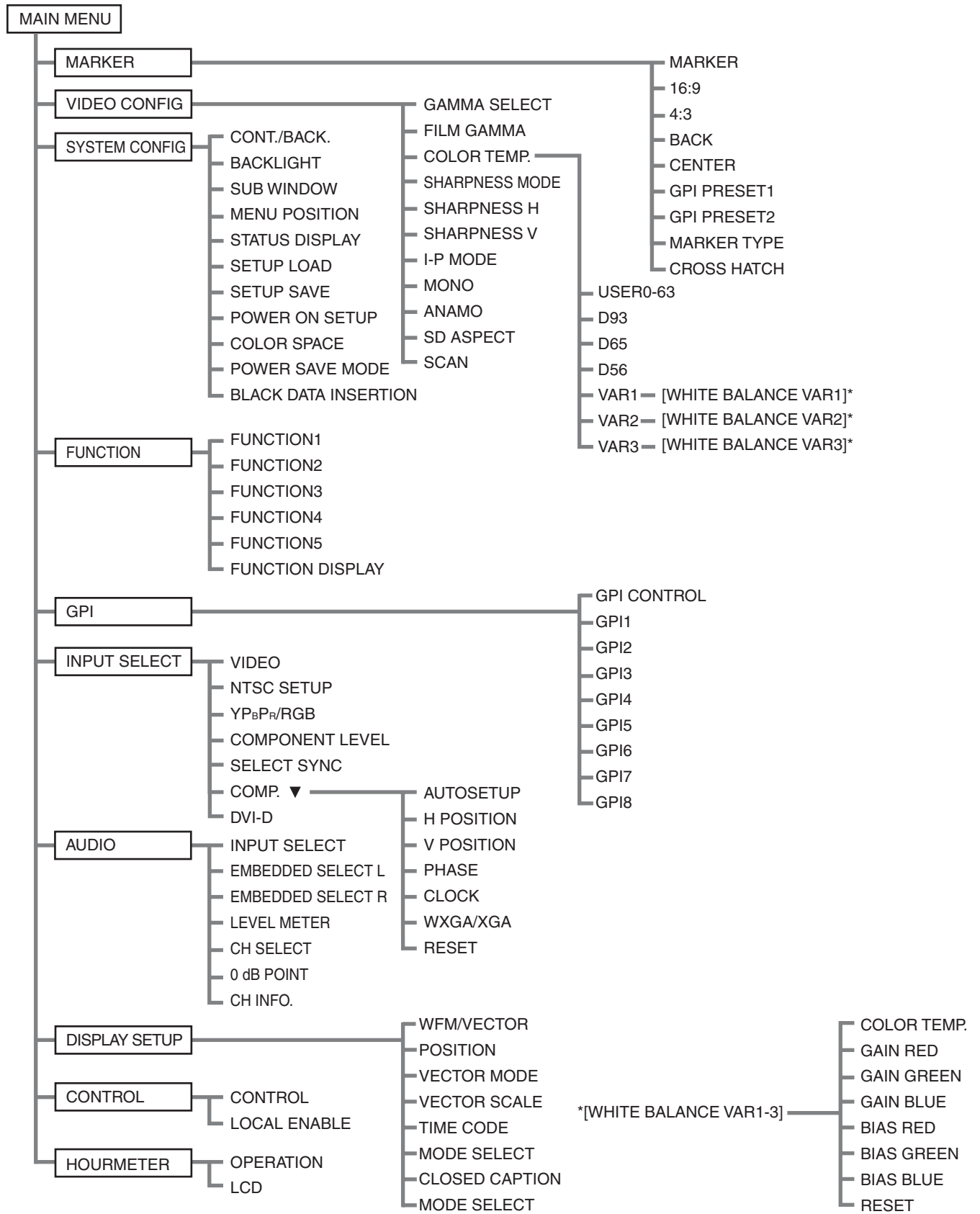
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**To return to the previous screen**

Push [MENU].

# Main Menu

## Menu configuration



# Main Menu (continued)

## MARKER

Underlined values indicate factory defaults.

Sub menu	Setting	Description
<b>MARKER</b>	<u>OFF</u> <sup>*1</sup> ON	Enables the MARKER setting.
<b>16:9</b> <sup>*2*3</sup>	OFF <u>4:3</u> 13:9 14:9 CNSCO VISTA 95% 93% 90% 88% 80%	Selects and displays marker type for 16:9 aspect ratio. <OFF> No marker display <4:3> 4:3 marker <13:9> 13:9 marker <14:9> 14:9 marker <CNSCO> CNSCO marker <VISTA> VISTA marker <95%> 95% area marker <90%> 90% area marker <80%> 80% area marker <93%> 93.1% area marker (TYPE1) <93%> 93% area marker (TYPE2) <88%> 89.5% area marker (TYPE1) <88%> 88% area marker (TYPE2)
<b>4:3</b> <sup>*2*4</sup>	<u>OFF</u> 95% 93% 90% 88% 80%	Selects and displays marker type for 4:3 aspect ratio. <OFF> No marker display <95%> 95% area marker <93%> 93% area marker <90%> 90% area marker <80%> 80% area marker <88%> 89% area marker (TYPE1) <88%> 88% area marker (TYPE2)
<b>BACK</b> <sup>*2</sup>	<u>NORMAL</u> HALF BLACK	Selects the background brightness around the marker. <NORMAL> Normal background <HALF> 50% background brightness <BLACK> 0% background brightness (black)
<b>CENTER</b> <sup>*2</sup>	<u>OFF</u> ON	Displays the center marker. <OFF> Turns the display off <ON> Turns the display on
<b>GPI PRESET1</b> <sup>*5</sup>	4:3 13:9 14:9 CNSCO VISTA	GPI PRESET1: Selects the marker displayed by the GPI terminal "MARKER1 ON/OFF" (→ page 36) operation. GPI PRESET2: Selects the marker displayed by the GPI terminal "MARKER2 ON/OFF" (→ page 36) operation. <4:3> 4:3 marker <13:9> 13:9 marker <14:9> 14:9 marker <CNSCO> CNSCO marker <VISTA> VISTA marker
<b>GPI PRESET2</b> <sup>*5</sup>	<u>95% (16:9)</u> 93% (16:9) 90% (16:9) 88% (16:9) 80% (16:9) 95% (4:3) 93% (4:3) 90% (4:3) 88% (4:3) 80% (4:3)	
<b>MARKER TYPE</b> <sup>*6</sup>	<u>TYPE1</u> TYPE2	Selects conventional monitor or camera recorder marker size. <TYPE1> Conventional monitor marker size <TYPE2> Marker size compliant with the camera recorder (Panasonic)
<b>CROSS HATCH</b>	HIGH LOW <u>OFF</u>	Turns the cross hatch grid on and off and sets its density. <HIGH> 70/256 (displays a dense cross hatch grid) <LOW> 20/256 (displays a light cross hatch grid) <OFF> Turns the display off

\*1 This setting is turned "ON" when receiving marker control in REMOTE operation. (GPI, if set, has priority.)

\*2 These settings are disabled when the GPI function (→ page 36) is used to control the marker setting. They are also disabled in split screen mode.

\*3 This setting is enabled only for HD and SD signal input in 16:9 aspect ratio mode.

\*4 This setting is enabled for SD signal input in 4:3 aspect ratio mode.

\*5 Remote control via RS-232C ends in error (error response: ER001) when "GPI PRESET1" or "GPI PRESET2" is selected with the GPI function.

\*6 Display size for SD signals differ.


TYPE1: The effective horizontal area meets the SMPTE125M for NTSC and ITU-R BT 601-5 for PAL.

TYPE2: The effective horizontal area meets the EIA-RS170 for NTSC and ITU-R BT 470-4 for PAL.

# Main Menu (continued)

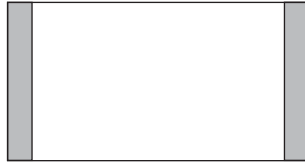
## Marker types

### ■ 16:9 marker (Displayed for HD input and SD input in 16:9 ratio mode.)

This marker is only displayed as a vertical bar. The  section becomes the "MARKER BACK".



4:3 marker



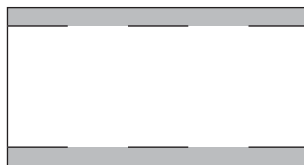
13:9 marker



14:9 marker

### VISTA marker, CNSCO marker

This marker is displayed as a horizontal dotted line.



VISTA marker



CNSCO marker

The marker is displayed as a vertical dotted line when "UNDER" is selected under "SCAN" in the "VIDEO CONFIG" menu.



VISTA marker



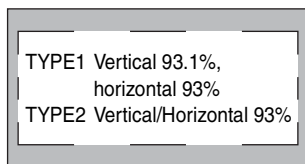
CNSCO marker

### Area marker

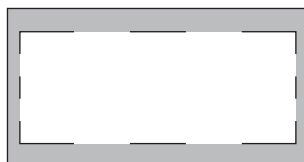
This marker is displayed as a dotted line.



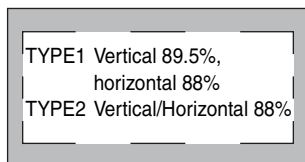
95% Area marker



93% Area marker



90% Area marker



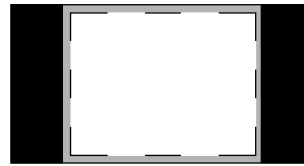
88% Area marker



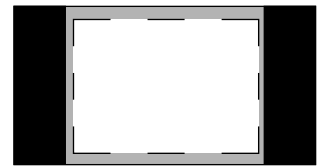
80% Area marker

### ■ 4:3 marker (Displayed for SD input in 4:3 aspect ratio mode)

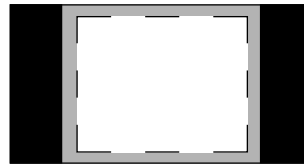
This marker is displayed as a dotted line.



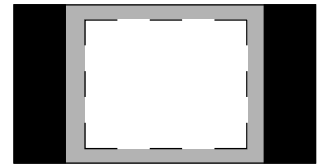
95% Area marker



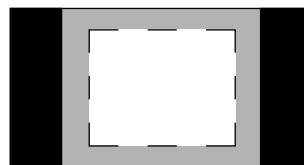
93% Area marker



90% Area marker



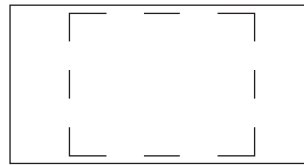
88% Area marker



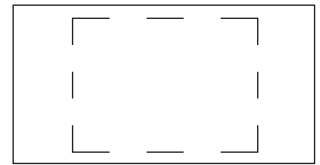
80% Area marker

### (Displayed for HD input and SD input in 16:9 ratio mode.)

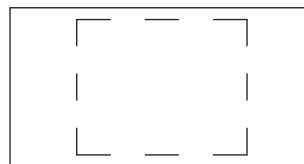
This marker is displayed as a dotted line.



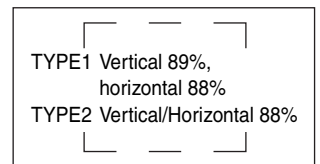
95% Area marker



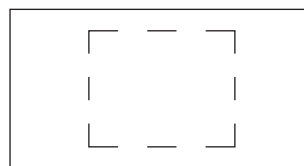
93% Area marker



90% Area marker




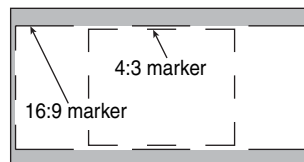
88% Area marker



80% Area marker

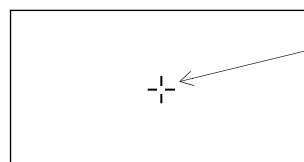
\* You can display the 4:3 marker and the 16:9 marker simultaneously. Simultaneous display example

The  section becomes the "MARKER BACK". It controls the background of the marker selected with a 16:9 ratio.



16:9 marker:  
95% area marker  
4:3 marker:  
80% area marker

### ■ Center marker



Center marker  
This marker is displayed at the center of the screen.

# Main Menu (continued)

## VIDEO CONFIG

Underlined values indicate factory defaults.

Sub menu	Settings	Description
<b>GAMMA SELECT</b> <sup>*1*2</sup>	STANDARD FILM <u>STDIO/PST</u>	Selects gamma curve. <STANDARD> Standard mode    <FILM> Film mode <STDIO/PST> Color emphasis mode (a mode that approximates CRT display capability suitable for studio or postproduction application) The <b>FILM</b> mark appears at the top left of the screen when "FILM" is selected.
<b>FILM GAMMA</b> <sup>*2</sup>	<u>VARICAM</u> OTHER	Selects type of FILM gamma mode. <VARICAM> For VARICAM use    <OTHER> Other
<b>COLOR TEMP.</b>	USER0 - 63 <sup>*5</sup> D93 <u>D65</u> D56 VAR1 VAR2 VAR3	Selects color temperature. <USER 0 - 63> Adjustable settings 0 - 63 (equivalent to a color temperature range of 3,000 - 9,300K) <D93> Equivalent to a color temperature of 9,300K <D65> Equivalent to a color temperature of 6,500K <D56> Equivalent to a color temperature of 5,600K <VAR1> WB adjustment mode <sup>*4</sup> <VAR2> WB adjustment mode <sup>*4</sup> <VAR3> WB adjustment mode <sup>*4</sup>
<b>SHARPNESS MODE</b> <sup>*2</sup>	HIGH <sup>*3</sup> LOW	Selects the width of outline correction edge. <HIGH> Thin edge    <LOW> Wide edge
<b>SHARPNESS H</b> <sup>*2</sup>	0 - 30 <sup>*3</sup>	Sets horizontal outline correction. The item display moves to the lower part of the screen during adjustment.
<b>SHARPNESS V</b> <sup>*2</sup>	0 - 30 <sup>*3</sup>	Sets vertical outline correction. The item display moves to the lower part of the screen during adjustment.
<b>I-P MODE</b> <sup>*2*6</sup>	MODE2 <u>MODE1</u>	Selects IP conversion mode. (→ page 21, "IP mode") <MODE2> Inter-field interpolation <MODE1> Inter-frame interpolation
<b>MONO</b> <sup>*2</sup>	<u>OFF</u> ON	Switches between color and monochrome (MONO). <OFF> Color    <ON> Monochrome * When ON, the CHROMA setting of the picture adjusting knob is fixed at 0.
<b>ANAMO</b> <sup>*2*7</sup>	<u>OFF</u> ON	With an Anamo lens and SDI 720/60P, 59.94P input, the picture is resized to Anamo magnification (the vertically enlarged signal can be vertically compressed and corrected for display).
<b>SD ASPECT</b> <sup>*2</sup>	<u>4:3</u> 16:9	Sets the aspect ratio for SD signal input. <4:3> 4:3 display    <16:9> 16:9 display
<b>SCAN</b> <sup>*2</sup>	<u>NORMAL</u> UNDER	Sets under-scan and normal display. <NORMAL> Normal display    <UNDER> Under-scan

\*1 In split-screen display, changes are not reflected to the still image in the main window.

\*2 These functions are not available when "RGB-COMP:" under "YPbPr/RGB" or "DVI-COMP:" under "DVI-D" is selected in the "INPUT SELECT" menu (→ page 30).

\*3 The following sharpness values are available and the settings for the selected input signal is displayed. Adjustment status during selection appears at the bottom right of the screen.

1) VIDEO system input (VIDEO) (the factory defaults are SHARPNESS MODE: LOW and SHARPNESS H/V: 0)

2) HD for any other input (the factory defaults are SHARPNESS MODE: HIGH and SHARPNESS H/V: 0).

3) SD for any other input (the factory defaults are SHARPNESS MODE: LOW and SHARPNESS H/V: 0).

\*4 Selecting "VAR1", "VAR2" and "VAR3" engages the WB adjustment mode (→ page 21).

\*5 To select USER0 - 63,

1) Press [ENTER] ("USER" changes to blue).    2) Use [V, ^] to select 0 - 63 and press [ENTER].

\*6 To use the "SUB WINDOW" (→ page 25) function,

1) Change settings after exiting the "SUB WINDOW" function.

2) It is recommended to use "MODE2" for handling fast video.

\*7 "SCAN" changes are not reflected in Anamo size display.

## Main Menu (continued)

### IP mode

“MODE1” performs IP conversion using inter-frame interpolation.

Conventional inter-frame interpolation involved 1-frame or greater delay, but this monitor suppresses the delay to within 1 field.

The factory default is “MODE1”.

“MODE2” performs IP conversion using inter-field interpolation.

Since interpolation is performed inside each field, this mode is suitable for checking interlace status.

### ■ WB adjustment mode

Select “VAR1” to “VAR3” for “COLOR TEMP.” in the “VIDEO CONFIG” menu to make “WHITE BALANCE VAR1” to “WHITE BALANCE VAR3” (WB) adjustments.

Underlined values indicate factory defaults.

Sub menu	Settings	Description
<b>COLOR TEMP.</b> <sup>*1</sup>	USER0 - 6 D93 <u>D65</u> D56	Selects the color temperature that will become the basis for adjustment. <USER 0 - 63> Adjustable settings 0 - 63 (equivalent to a color temperature range of 3,000 - 9,300K) <D93> Equivalent to a color temperature of 9,300K <D65> Equivalent to a color temperature of 6,500K <D56> Equivalent to a color temperature of 5,600K
<b>GAIN RED</b>	0 - 1023 (Factory defaults are color temperature <D65> values.) * These are the adjustments made before shipment from the factory.	Adjusts the GAIN elements for RED. <sup>*2</sup>
<b>GAIN GREEN</b>		Adjusts the GAIN elements for GREEN. <sup>*2</sup>
<b>GAIN BLUE</b>		Adjusts the GAIN elements for BLUE. <sup>*2</sup>
<b>BIAS RED</b>	-512 - 511 (Factory default: 0)	Adjusts the BIAS elements for RED. <sup>*2</sup>
<b>BIAS GREEN</b>		Adjusts the BIAS elements for GREEN. <sup>*2</sup>
<b>BIAS BLUE</b>		Adjusts the BIAS elements for BLUE. <sup>*2</sup>
<b>RESET</b>		Resets “GAIN RED” - “BIAS BLUE” to color temperature values selected under “COLOR TEMP.”

\*1 Selecting “COLOR TEMP.” and pressing [ENTER] after making a change, opens a confirmation screen. Selecting “YES” and pressing [ENTER] in this screen resets selected GAIN and BIAS values to the selected color temperature values.

\*2 The item display moves to the lower part of the screen during adjustment.

# Main Menu (continued)

## SYSTEM CONFIG

Underlined values indicate factory defaults.

Sub menu	Settings	Description
<b>CONT./BACK.</b>	<u>BACKLIGHT</u> CONTRAST	Selects function to be assigned to [CONTRAST/BACKLIGHT] (front panel knob). <BACKLIGHT> Adjusts the BACKLIGHT. <CONTRAST> Adjusts the CONTRAST.
<b>BACKLIGHT</b>	0 - <u>60</u>	Adjusts LCD backlight brightness. Adjust as required by ambient conditions.
<b>SUB WINDOW</b>	<u>FULL</u> PART	Selects sub-window type. <FULL> Reduces the entire images for both input signals and places them side by side. <PART> Cuts out the center of the images for both input signals and places them side by side (the images are shown at their original size).
<b>MENU POSITION</b>	<u>CENTER</u> LB RB RT LT	Positions the on-screen menu. <CENTER> Center of the screen <LB> Left Bottom                      <RB> Right Bottom <RT> Right Top                         <LT> Left Top
<b>STATUS DISPLAY</b>	CONTINUE <u>3SEC OFF</u> OFF	Sets display state for input signal status (on-screen menu). <CONTINUE> Displayed at all times <3SEC OFF> Displayed for 3 seconds after a status change. <OFF> Not displayed.
<b>SETUP LOAD</b>	USER5 <sup>*1*2</sup> USER4 <sup>*1*2</sup> USER3 <sup>*1*2</sup> USER2 <sup>*1*2</sup> USER1 <sup>*1*2</sup> <u>FACTORY</u>	Loads saved factory defaults (FACTORY) or user data (USER1 - USER5). After loading user data, the screen displays the signal selected before user data was loaded.
<b>SETUP SAVE</b>	USER5 <sup>*2</sup> USER4 <sup>*2</sup> USER3 <sup>*2</sup> USER2 <sup>*2</sup> <u>USER1</u> <sup>*2</sup>	Up to 5 sets of user data can be saved (→ page 16). They save menu settings and adjustments made with the picture adjusting knob (PHASE/CHROMA/BRIGHT/CONTRAST/BACKLIGHT) except "SETUP SAVE/SETUP LOAD."
<b>POWER ON SETUP</b>	USER5 USER4 USER3 USER2 USER1 FACTORY <u>LAST</u>	Selects the settings used when the power is turned on. <LAST> Starts in the mode used when the power was last turned off. <FACTORY> Starts up using the factory defaults. <USER1 - 5> Starts up using USER registered settings.
<b>COLOR SPACE</b>	SMPTE-C <sup>*5</sup> EBU <sup>*5</sup> ITU-709 <sup>*4</sup>	Sets the studio standard color shade.
<b>POWER SAVE MODE</b>	<u>OFF</u> ON	Sets the power save mode <ON> The backlight dims when no signal (NO SIGNAL) is input for 60 seconds or longer. Signal input or menu operation will return the backlight to its normal brightness.
<b>BLACK DATA INSERTION</b>	OFF <u>ON</u>	Doubles the speed of the LCD panel. <sup>*3</sup> <ON> Double speed (120 Hz/100 Hz) <OFF> Standard speed (60 Hz/50 Hz)

\*1 When the monitor is shipped, settings for "USER1" - "USER5" are identical to "FACTORY."

\*2 "H-POSITION", "V-POSITION", "PHASE" and "CLOCK" (→ page 31) cannot be saved or loaded.

\*3 Double speed reduces image lag caused by black signal input but lowers resolution compared to standard speed and some images may generate flicker. Return to standard speed should flicker become noticeable.

\*4 ITU-709 is an ITU-R BT.709 standard.

\*5 Factory preset settings are The U.S.A. and Canada: SMPTE-C, Others: EBU.

# Main Menu (continued)

## FUNCTION

Underlined values indicate factory defaults.

Sub menu	Settings	Description
<b>FUNCTION 1 - FUNCTION 5</b>	HV DELAY AUTOSETUP BLUE ONLY GAMMA SELECT SD ASPECT SCAN SUB WINDOW WFM/VECTOR MARKER PIXEL TO PIXEL PIXEL POSITION LEVEL METER CROSS HATCH MONO TIME CODE CLOSED CAPTION UNDEF  (Factory default: FUNCTION1: MARKER FUNCTION2: WFM/VECTOR FUNCTION3: PIXEL TO PIXEL FUNCTION4: TIME CODE FUNCTION5: LEVEL METER)	Selects functions to be assigned to [FUNCTION1] - [FUNCTION5] (front panel buttons). <HV DELAY> Displays synchronizing signals (horizontal, vertical). The display changes in the following order. DELAY OFF → V DELAY → H DELAY → HV DELAY → DELAY OFF <AUTOSETUP> Performs auto setup for PC display. <BLUE ONLY> Cuts the red and green signals. Use this function to check phase and chroma. This button toggles between ON and OFF. <GAMMA SELECT>* <sup>1</sup> Displays the gamma curve. The display changes in the following order. GAMMA STANDARD → GAMMA FILM → GAMMA STUDIO/PST → GAMMA STANDARD <SD ASPECT> Switches between "16:9" and "4:3."* <sup>1</sup> <SCAN> Switches between "UNDER SCAN" and "NORMAL SCAN".* <sup>1</sup> <SUB WINDOW> Sets the split-screen function.* <sup>1</sup> The display changes in the following order. SINGLE → FULL/PART → STILL → SINGLE <WFM/VECTOR> Displays waveform or vector display. <MARKER> Turns the marker on and off. <PIXEL TO PIXEL> Turns the PIXEL TO PIXEL function On and Off. <PIXEL POSITION> Positions the display of signals in PIXEL TO PIXEL mode. <LEVEL METER> Turns the LEVEL METER display On and Off. <TIME CODE> Turns the time code display on and off. <MONO> Switches between color and monochrome. <CLOSED CAPTION> Turns the closed caption display on and off. <UNDEF> Undefined
<b>FUNCTION DISPLAY</b>	OFF ON1 <u>ON2</u>	Selects display of functions assigned to [FUNCTION1] - [FUNCTION5] (front panel buttons). It also selects button action (1-touch, 2-touch, off). <ON1> 1-touch action to display and perform functions. <ON2> 2-touch action to display and perform functions. <OFF> No function display.

\*1 Changes in settings change menu settings.

## Main Menu (continued)

### ■ FUNCTION setting restrictions

Settings are not available under the following conditions.

Setting	Conditions that disable operation
<b>HV DELAY</b>	During SUB WINDOW, WFM, PIXEL TO PIXEL mode operation, "INVALID FUNCTION" appears to indicate that operation is disabled. When "RGB-COMP." is selected under "YP <sub>B</sub> PR/RGB" or "DVI-COMP." is selected under "DVI-D" in the "INPUT SELECT" menu, "INVALID FUNCTION" appears to indicate that operation is disabled.
<b>AUTO SETUP</b>	When something other than "RGB-COMP." is selected under "YP <sub>B</sub> PR/RGB" in the "INPUT SELECT" menu, "NOT RGB-COMP. CH" appears to indicate that operation is disabled. When "RGB-COMP." is selected under "YP <sub>B</sub> PR/RGB" in the "INPUT SELECT" menu and no signal is input, "INCOMPLETE" appears to indicate that operation is disabled.
<b>GAMMA SELECT</b>	When GPI is set, "INVALID FUNCTION" appears to indicate that operation is disabled. When "RGB-COMP." is selected under "YP <sub>B</sub> PR/RGB" or "DVI-COMP." is selected under "DVI-D" in the "INPUT SELECT" menu, "INVALID FUNCTION" appears to indicate that operation is disabled.
<b>SD ASPECT</b>	When GPI is set, "INVALID FUNCTION" appears to indicate that operation is disabled. During SUB WINDOW (still image) and HD display (including PIXEL TO PIXEL), "INVALID FUNCTION" appears to indicate that operation is disabled.
<b>SCAN</b>	When GPI is set, "INVALID FUNCTION" appears to indicate that operation is disabled. During SUB WINDOW and PIXEL TO PIXEL mode operation, "INVALID FUNCTION" appears to indicate that operation is disabled.
<b>SUB WINDOW</b>	When "RGB-COMP." is selected under "YP <sub>B</sub> PR/RGB" or "DVI-COMP." is selected under "DVI-D" in the "INPUT SELECT" menu, "INVALID FUNCTION" appears to indicate that operation is disabled. If you select "RGB-COMP." or "DVI-COMP." while motion picture is displayed in sub-window, the screen returns to a single screen display. Selecting something other than "RGB-COMP." or "DVI-COMP." opens the split screen mode and a still image is blacked out.
<b>WFM/VECTOR</b>	During SUB WINDOW and PIXEL TO PIXEL mode operation, "INVALID FUNCTION" appears to indicate that operation is disabled. When "RGB-COMP." or "RGB-VIDEO" is selected under "YP <sub>B</sub> PR/RGB", or "DVI-COMP." or "DVI-VIDEO" is selected under "DVI-D" in the "INPUT SELECT" menu, "INVALID FUNCTION" appears to indicate that WFM operation is disabled. 1080/23P, 24P, 25P, 29P or 30P input causes "INVALID FUNCTION" to appear indicating that operation is disabled, VECTOR does not appear when a selection other than "SDI" is made in the "INPUT SELECT" menu.
<b>MARKER</b>	When "RGB-COMP." is selected under "YP <sub>B</sub> PR/RGB" or "DVI-COMP." is selected under "DVI-D" in the "INPUT SELECT" menu, "INVALID FUNCTION" appears to indicate that operation is disabled. When GPI is set during sub-window operation, "INVALID FUNCTION" appears to indicate that operation is disabled.
<b>PIXEL TO PIXEL</b>	When "SD1" or "SD2" is selected in the "INPUT SELECT" menu during 1080I/P signal input or "YP <sub>B</sub> PR" is selected in "YP <sub>B</sub> PR/RGB", 1080I/P signal input is enabled. When other settings are made, "INVALID FUNCTION" appears to indicate that operation is disabled. In SUB WINDOW mode, "INVALID FUNCTION" appears to indicate that operation is disabled.
<b>LEVEL METER</b>	When input is something other than SDI, "INVALID FUNCTION" appears to indicate that operation is disabled.
<b>MONO</b>	When GPI is set, "INVALID FUNCTION" appears to indicate that operation is disabled.
<b>TIMECODE</b>	When input is something other than HD-SDI input, "INVALID FUNCTION" appears to indicate that operation is disabled.

## Main Menu (continued)

### ■ Functions displayed during FUNCTION button operation

Pressing any of the [FUNCTION1] to [FUNCTION5] buttons displays the operations assigned to each button as shown below.

- **HV DELAY**  
DELAY OFF/V DELAY/H DELAY/HV DELAY
- **AUTOSETUP**  
AUTOSETUP/COMPLETE/INCOMPLETE/NOT  
RGB-COMP.CH
- **BLUE ONLY**  
BLUE ONLY ON/BLUE ONLY OFF
- **GAMMA SELECT**  
GAMMA STANDARD/GAMMA FILM/GAMMA  
STUDIO/PST
- **SD ASPECT**  
4:3/16:9
- **SCAN**  
NORMAL SCAN/UNDER SCAN
- **SUB WINDOW**  
SINGLE/FULL/PART/STILL
- **WFM/VECTOR**  
WFM ON/WFM/VECTOR OFF/VECTOR × 1/  
VECTOR × 2/VECTOR × 4/VECTOR × 8
- **MARKER**  
MARKER OFF/4:3 MARKER/13:9 MARKER/14:9  
MARKER/VISTA MARKER/CNSCO MARKER/95%  
MARKER/93% MARKER/90% MARKER/88%  
MARKER/80% MARKER/MARKER ON
- **PIXEL TO PIXEL**
- **PIXEL POSITION**  
CENTER/LEFT TOP/LEFT BOTTOM/RIGHT TOP/  
RIGHT BOTTOM/PIXEL TO PIXEL OFF
- **AUDIO LEVEL METER**  
METER OFF/METER 2CH/METER 4CH/METER  
8CH
- **CROSS HATCH**  
CROSS HATCH HIGH/CROSS HATCH LOW/  
CROSS HATCH OFF
- **MONO**  
MONO ON/MONO OFF
- **TIME CODE**  
LTC/VITC/LUB/VUB/TC OFF
- **CLOSED CAPTION**  
CC1/CC2/CC3/CC4/CC OFF

### ■ “HV DELAY”

This displays the blanking period. Each press of the button changes the display as follows: H blanking display → V blanking display → H and V blanking display → no blanking display.

### ■ “SUB WINDOW”

Opening the “SUB WINDOW” function splits the screen (main window) in two as shown below to enable comparison of a recorded still image with live video.

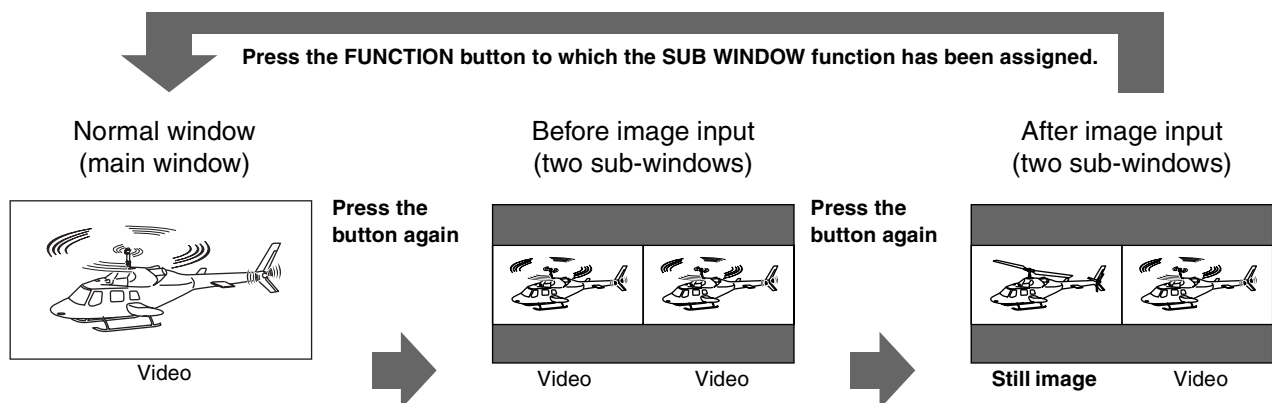
Use the “SUB WINDOW” setting (FULL, PART) in the “SYSTEM CONFIG” menu (→ page 22) to set up the function as shown below.

Press the button ([FUNCTION1] to [FUNCTION5]) (→ page 23)) to which the “SUB WINDOW” function has been assigned to turn the function on and off. (This assumes that the “SUB WINDOW” function has been assigned to any of the [FUNCTION1] to [FUNCTION5] buttons.)

To setup “IP MODE” (→ page 20), exit the “SUB WINDOW” function first.

### • FULL

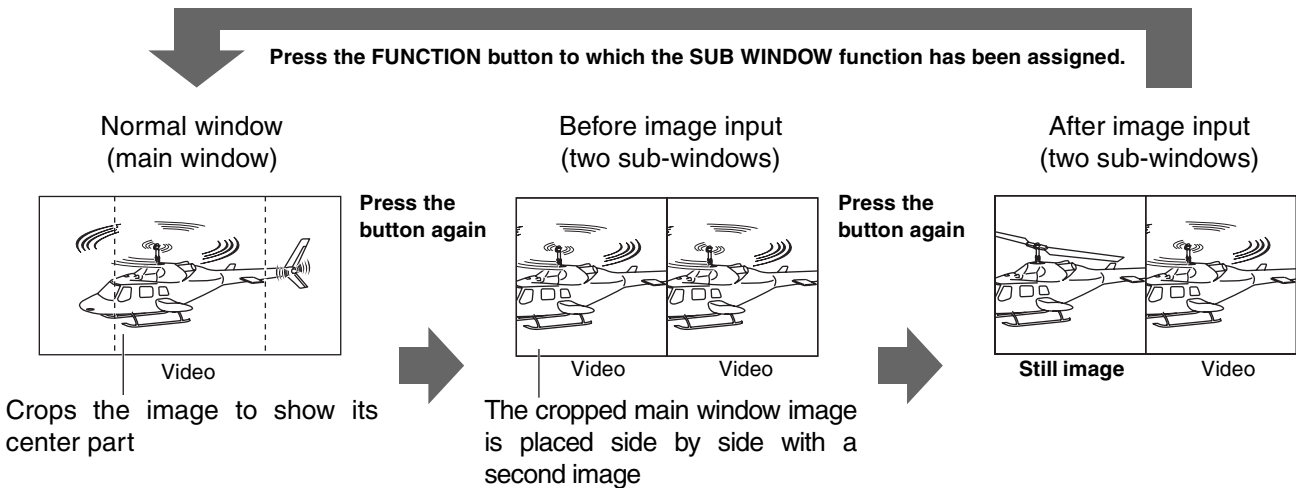
Resizes the main window to also display a second window (two sub-windows).



# Main Menu (continued)

## • PART

Resizes the main window to show only its center to also display a second image (two sub-windows).



These examples show 16:9 aspect ratio images.

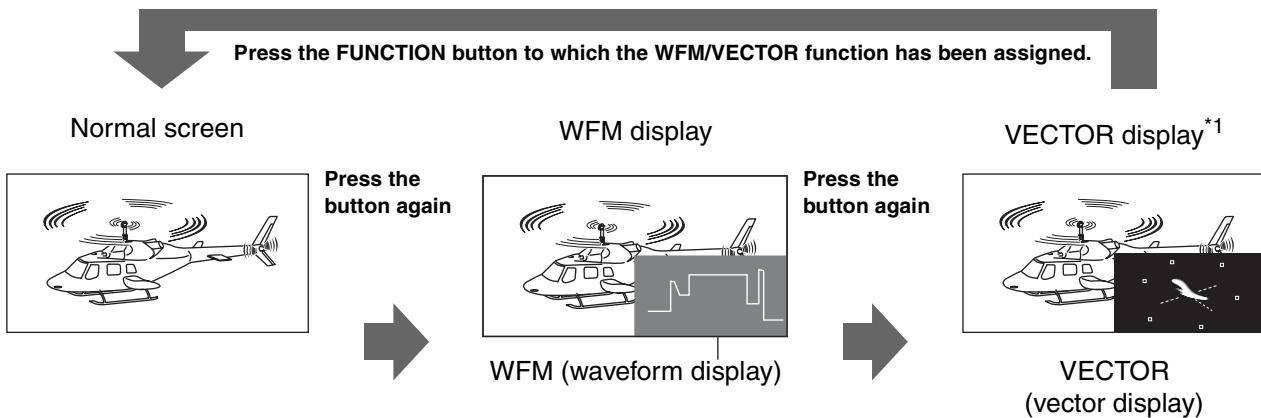
### Note on FULL/PART selection

This function is designed to enable comparison of identical formats input to the same input terminal. Input of different formats via different input channels may distort the sub-window (left side, still image) or blanking could occur. However, input of an identical format signal to the input terminal during still image acquisition will display correctly.

## ■ “WFM/VECTOR”

The “WFM/VECTOR” function enables display of the waveform and vector display. Use “DISPLAY SETUP” in the main menu to select “WFM” and “VECTOR” display. (→ page 33)

Press the button ([FUNCTION1] to [FUNCTION5] (→ page 23)) to which the “WFM/VECTOR” function has been assigned to turn the function on and off. (This assumes that the “WFM/VECTOR” function has been assigned to any of the [FUNCTION1] to [FUNCTION5] buttons.)



These examples show 16:9 aspect ratio images.

\*1 Displayed only for SDI signal input.

## Main Menu (continued)

### ■ “PIXEL TO PIXEL” and “PIXEL POSITION”

The “PIXEL TO PIXEL” function allows you to check images at their actual pixel resolution (1080i/P signals only). Press the button ([FUNCTION1] to [FUNCTION5] (→ page 23)) to which the “PIXEL TO PIXEL” function has been assigned to turn the function on. Then press the button ([FUNCTION1] to [FUNCTION5] (→ page 23)) to which the “PIXEL POSITION” function has been assigned to position the display of signals. (This assumes that the “PIXEL TO PIXEL” and “PIXEL POSITION” functions have been assigned to any of the [FUNCTION1] to [FUNCTION5] buttons.)

Underlined values indicate factory defaults.

Sub menu	Settings	Description
<b>PIXEL TO PIXEL</b> *1*2	<u>OFF</u> ON	Tailors the image display size to the input signal size. Compatible formats 1080/60I/59I/50I/60P/59P/50P/30P/29P/25P/24P/23P/24Psf/23Psf
<b>PIXEL POSITION</b>	<u>CENTER</u> LEFT TOP RIGHT TOP RIGHT BOTTOM LEFT BOTTOM	Positions the display of signals in PIXEL TO PIXEL mode. <CENTER> Center of the screen <LT> Left Top <RT> Right Top <RB> Right Bottom <LB> Left Bottom

\*1 The following settings are disabled in PIXEL TO PIXEL mode.

Setting “ANAMO” to “ON”, and setting “SCAN” to “UNDER” in “VIDEO CONFIG”

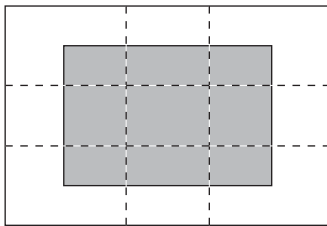
Any “HV DELAY” setting in “FUNCTION”

“MARKER” display

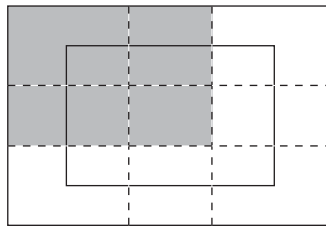
\*2 Enabled during “SDI1”, “SDI2” and “YPbPr” input.

### ■ “PIXEL POSITION” display position sequence

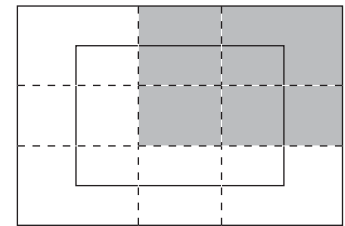
PIXEL POSITION: ① → ② → ③ → ④ → ⑤ → ① ………



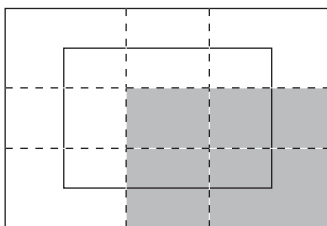
① CENTER



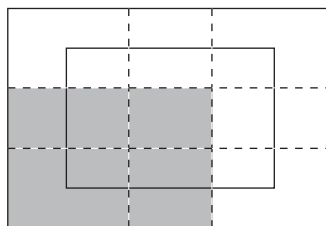
② LEFT TOP



③ RIGHT TOP



④ RIGHT BOTTOM



⑤ LEFT BOTTOM

## Main Menu (continued)

### ■ “CROSS HATCH”

The “CROSS HATCH” function enables display of markers at regular vertical and horizontal intervals to facilitate composition and other tasks. The width of marker lines is 1 dot, the markers consist of 1 line, and are spaced 80 dots apart (fixed value).

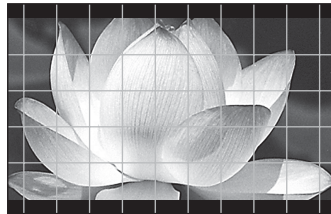
Each press of the button (“FUNCTION1” to “FUNCTION5”) to which the “CROSS HATCH” has been assigned turns the function on and off.

Each press of the FUNCTION button to which the “CROSS HATCH” function is assigned changes the display as shown.

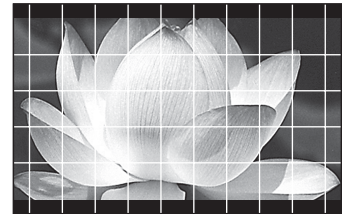
#### HD/SD (16:9) mode



1st press



2nd press



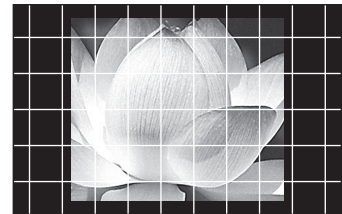
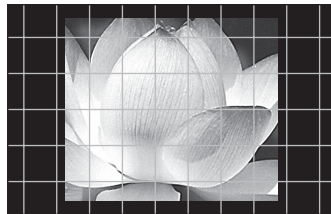
#### SD (4:3) mode



Light cross hatch



Dense cross hatch



3rd press (back to original image without cross hatch)

## Main Menu (continued)

### GPI

“GPI CONTROL” is used to enable and disable GPI functions and assign functions to each of the GPI terminal pins (→ page 36).

Underlined values indicate factory defaults.

Sub menu	Settings	Description
<b>GPI CONTROL</b>	<u>DISABLE</u> ENABLE	Enables and disables GPI functions <DISABLE> Disabled <ENABLE> Enabled
<b>GPI1 - GPI8</b>	<u>UNDEF</u> MARKER1 ON/OFF MARKER2 ON/OFF MARKER BACK HALF MARKER BACK BLACK CENTER MARKER INPUT SEL. VIDEO INPUT SEL. SDI1 INPUT SEL. SDI2 INPUT SEL. YP <sub>B</sub> P <sub>R</sub> /RGB INPUT SEL. DVI-D SD ASPECT SCAN R-TALLY G-TALLY MONO GAMMA SEL. FILM GAMMA SEL. STDIO/PST SELECT SYNC PIXEL TO PIXEL	Assigns functions to the GPI control terminal pins. The same items can be set to each terminal (→ page 36).

#### Note:

This function is not available when,

- “SD ASPECT” operation when input signal is HD or PC
- “SCAN” operation when the input signal is PC
- “GAMMA SELECT” operation when the input signal is PC
- “SELECT SYNC” operation when anything other than “RGB-VIDEO” is selected under “YP<sub>B</sub>P<sub>R</sub>/RGB” in the “INPUT SELECT” menu
- “MONO” operation when input signal is PC



## Main Menu (continued)

### ■ COMP.

Selecting “RGB-COMP.” under “YP<sub>B</sub>P<sub>R</sub>/RGB” in the “INPUT SELECT” menu opens the following menu.

Underlined values indicate factory defaults.

Sub menu	Settings	Description
<b>AUTOSETUP</b> *1		Selecting “RGB-COMP.” under “YP <sub>B</sub> P <sub>R</sub> /RGB” in the “INPUT SELECT” menu automatically adjusts the screen. A separate screen opens. Select “YES” to perform “AUTOSETUP.”
<b>H POSITION</b>	0 - 60 (Factory preset settings: 30)	Adjusts horizontal image display position.*2
<b>V POSITION</b>	0 - 60 (Factory preset settings: 30)	Adjusts vertical image display position.*2
<b>PHASE</b>	0 - 31 (Factory preset settings: 16)	Adjusts the clock phase in 1/32 clock period increments.*2
<b>CLOCK</b>	700 - 1800 (Factory preset settings:*3)	Adjusts the sampling clock in dot units.*2
<b>WXGA/XGA</b>	<u>XGA</u> WXGA	Switches between WXGA and XGA.
<b>RESET</b>		Returns “H POSITION”, “V POSITION”, “PHASE” and “CLOCK” settings in the COMP. input compliant format to their factory defaults.

\*1 “EXECUTING” is displayed during “AUTOSETUP” and “COMPLETE” appears when setup completes. “INCOMPLETE” is displayed if setup could not be completed.

AUTOSETUP may not provide adequate adjustment for some video input. Use H POSITION, V POSITION, PHASE and CLOCK to adjust.

\*2 Each input format can be adjusted but not when user data is loaded (“SETUP LOAD” → page 22) or saved (“SETUP SAVE” → page 22).

\*3 “CLOCK” factory default

FORMAT	CLOCK	FORMAT	CLOCK
640 × 400 (70 Hz)	800	1024 × 768 (60 Hz)	1344
640 × 480 (60 Hz)	800	1024 × 768 (70 Hz)	1328
640 × 480 (75 Hz)	840	1024 × 768 (75 Hz)	1312
640 × 480 (85 Hz)	832	1024 × 768 (85 Hz)	1376
800 × 600 (60 Hz)	1056	1280 × 768 (50 Hz)	1648
800 × 600 (70 Hz)	1040	1280 × 768 (60 Hz)	1680
800 × 600 (75 Hz)	1056	1280 × 768 (75 Hz)	1712
800 × 600 (85 Hz)	1048	1280 × 1024 (60 Hz)	1688

## Main Menu (continued)

### AUDIO

Sets speaker and headphones output.

Underlined values indicate factory defaults.

Sub menu	Settings	Description
<b>INPUT SELECT</b>	<u>AUTO</u> ANALOG	Selects speaker and headphones output. <AUTO> When an SDI input line is selected with the [INPUT SELECT] button on the front panel: embedded audio (SDI terminal) When input lines other than SDI1 or SDI2 are selected with the [INPUT SELECT] button on the front panel: analog (AUDIO input terminal) <ANALOG> Analog (AUDIO input terminal)
<b>EMBEDDED SELECT L</b>	CH1 - CH8 (Factory default: CH1)	Selects embedded audio channel output to the speaker (L) or headphones (L).
<b>EMBEDDED SELECT R</b>	CH1 - CH8 (Factory default: CH2)	Selects embedded audio channel output to the speaker (R) or headphones (R).
<b>LEVEL METER*1</b>	<u>OFF</u> ON	Selects embedded audio meter displayed by the on-screen display.
<b>CH SELECT</b>	<u>8CH</u> 4CH 2CH	Selects number of audio meter channels.
<b>0dB POINT</b>	OFF <u>ON</u>	Switches the 0 dB line displayed on the meter on and off.
<b>CH INFO.</b>	OFF <u>ON</u>	Switches the channel displayed on the meter on and off.

\*1 When ANALOG is selected in the "INPUT SELECT" menu, the LEVEL METER does not indicate the audio level even when set to ON.

## Main Menu (continued)

### DISPLAY SETUP

Underlined values indicate factory defaults.

Sub menu	Settings	Description
<b>WFM/ VECTOR</b>	<u>OFF</u> WFM VECTOR	Switches between “WFM/VECTOR” waveform and vector display. <WFM> Displays waveforms. <VECTOR> Displays vector waveforms.*3
<b>POSITION</b>	LB <u>RB</u> RT LT	Selects the position for the “WFM/VECTOR” waveform display.*3 <LB> Left Bottom <RB> Right Bottom <RT> Right Top <LT> Left Top
<b>VECTOR MODE</b>	× 8 × 4 × 2 <u>× 1</u>	Enlarges vector waveforms.*3 <× 8> 8× <× 4> 4× <× 2> 2× <× 1> 1×
<b>VECTOR SCALE</b>	<u>100%</u> 75%	Determines the scale of vector waveform. <100%> Displays it at 100% scale. <75%> Displays it at 75% scale.
<b>TIME CODE</b>	<u>OFF</u> ON	Turns the time code display on and off.*1
<b>MODE SELECT</b>	<u>LTC</u> VITC LUB VUB	Selects time code display mode.*1 <LTC> Displays linear time code (LTC). <VITC> Displays vertical interval time code (VITC). <LUB> Displays user bits included in LTC. <VUB> Displays user bits included in VITC.
<b>CLOSED CAPTION</b>	<u>OFF</u> ON	Turns closed caption display on and off.*2
<b>MODE SELECT</b>	CC4 CC3 CC2 <u>CC1</u>	Selects the cross caption display mode.*2

\*1 Available during HD-SDI input signals.

\*2 Available during VIDEO (NTSC) input. Closed captions appear as bright lines on line 21 when closed caption is set to ON and underscan is also on.

\*3 Opens the vector display during SDI signal input.

## Main Menu (continued)

### CONTROL

Underlined values indicate factory defaults.

Sub menu	Settings	Description
<b>CONTROL</b>	<u>LOCAL</u> REMOTE	Selects operation. (with control clock) <LOCAL> Enables front panel operation <REMOTE> Enables remote operation (front panel operation is locked) <sup>*1</sup>
<b>LOCAL ENABLE</b> <sup>*2</sup>	<u>DISABLE.</u> INPUT	Selects the disabled operation on the front panel when selecting "REMOTE" under "CONTROL". <DISABLE> Disables all front panel operations. <INPUT> All controls except [INPUT SELECT] and the volume knob are disabled.

\*1 The menu can be displayed when the lock is engaged.

Only "CONTROL/LOCAL ENABLE" menu items are available when the lock is engaged.

The picture adjusting knob is disabled when the lock is engaged.

The "LOCAL ENABLE" setting determines operations in lock mode. The volume knob (→ page 9, **5**) can be used during lock engagement.

The key mark is displayed during lock engagement.



\*2 Only available when "REMOTE" is selected under "CONTROL."

### HOURLMETER

Underlined values indicate factory defaults.

Sub menu	Settings	Description
<b>OPERATION</b>	XXXXXXH <sup>*3</sup>	Displays the number of hours it has been on.
<b>LCD</b>	XXXXXXH <sup>*3</sup>	Displays the number of hours that the backlight has been on.

\*3 "XXXXXX" indicates the number of hours.

"XXXXXX": 262800H (about 30 years), 262800 or greater number results in "OVER".